



Lindab **PKA**

Formo - Perforated diffuser



Formo - Perforated diffuser

PKA



Description

PKA is a square diffuser with perforated face plate and can be used for both supply and extract air. PKA is suitable for horizontal supply of cooled air and can be equipped with accessories of various types in order to achieve optimal function.

Installing a PKA diffuser in a plenum box type MB or CB can help to achieve a stable airflow to the diffuser as well as realize the potential for individual adjustment.

MB box with damper type B is with a unique linear cone damper which allows to use the full operational working area and can balance with a high balancing pressure with low sound generation. Furthermore the construction of the damper provides a linear balancing characteristic, as well as an accurate and reliable measurement.

MB and CB box with damper type C or E are with rotating blade dampers for respectively supply and extract. Typically used in applications that do not require a high balancing pressure in the plenum box.

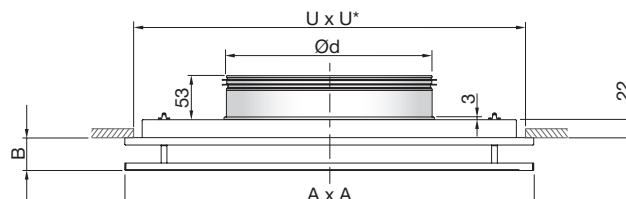
- Suitable for both supply and extract air
- Suitable for horizontal supply of cooled air
- Option of 1, 2 and 3-way supply air
- Plenum box with several damper options

Order Code

Product Type PKA	PKA	aaa
Connection dim Ød Ø125 - 400		

Example: PKA-200

Dimensions



PKA Ød mm	A mm	B mm	U* mm	Free area A m ²	m kg
125	235	37	200	0.018	0.9
160	295	37	260	0.023	1.3
200	395	37	360	0.030	2.2
250	495	41	460	0.043	3.1
315	595	41	560	0.057	4.3
400	595	41	560	0.075	4.3

* U x U = Ceiling grid opening.

Maintenance

The face plate can be removed to enable cleaning of internal parts or to gain access to the duct or box. The visible parts of the diffuser can be wiped with a damp cloth.

Materials and finish

Material: Galvanised steel
 Standard finish: Powder-coated
 Standard colours: RAL 9003 or RAL 9010, gloss 30

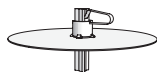
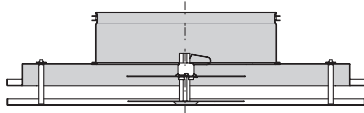
The diffuser is available in other colours. Please contact Lindab's sales department for further information.

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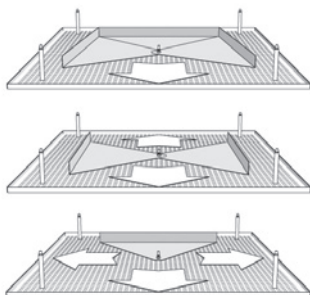
PKA

Accessories

DRZ - Balancing damper



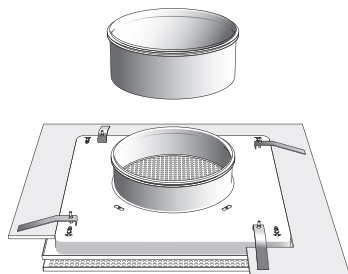
DAZ - Directional deflector (set)



MBZ - Extension piece



DKZ - Mounting brackets (set)

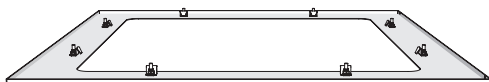


Order Code - accessories

Product aaa bbb
 Type _____
 Size _____

Example: DRZ-200

LM - Module plate



Order Code - module plate

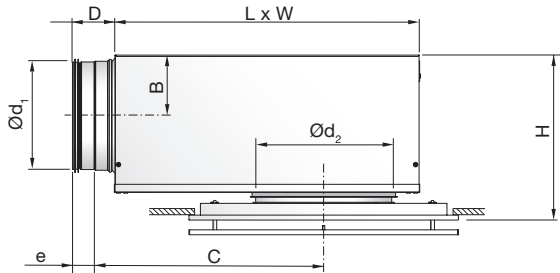
Product LM a PKA ccc
 Type _____
 Ceiling system _____
 Diffuser _____
 Size _____

Example: LM-1-PKA-200

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PKA + MB plenum box

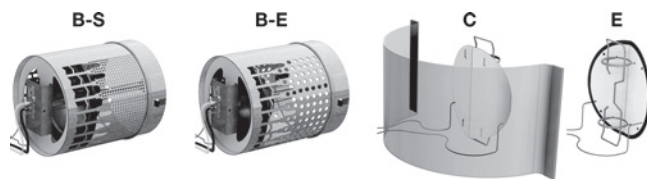


PKA + MB

Ød ₁ mm	Ød ₂ mm	B	C	D	e	H*	L	W
100	125	62	245	78	40	197 - 237	310	260
100	160	62	245	78	40	197 - 237	310	260
125	125	75	291	78	40	222 - 262	376	310
125	160	75	291	78	40	222 - 262	376	310
125	200	75	291	78	40	222 - 262	376	310
160	160	92	352	78	40	256 - 296	459	380
160	200	92	352	78	40	256 - 296	459	380
160	250	92	352	78	40	256 - 296	459	380
200	200	112	425	78	40	297 - 337	565	460
200	250	112	425	78	40	297 - 337	565	460
200	315	112	425	78	40	297 - 337	565	460
250	250	137	534	118	60	347 - 387	698	540
250	315	137	534	118	60	347 - 387	698	540
250	400	137	534	118	60	347 - 387	698	540
315	315	170	695	118	60	412 - 452	858	540
315	400	170	695	118	60	412 - 452	858	540

* Using accessory MBZ the H dimension will increase:
 Ød₂ = 125 - 200 mm => H +40 mm
 Ød₂ = 250 - 315 mm => H +60 mm
 Ød₂ = 400 mm => H +80 mm

Damper options



Order Code

Product MB a bbb ccc d

Type MB

Damper
 B = Linear cone damper
 C = Blade damper supply
 E = Blade damper extract

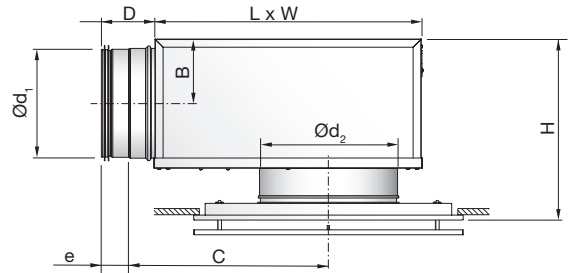
Duct connection Ød₁
 Ø100-315

Diffuser dimension Ød₂
 Ø125 - 400

Function (Only for B damper)
 S = Supply E = Extract

Example 1: PKA-200 + MBB-160-200 -S
 Example 2: PKA-200 + MBC-125-200

PKA + CBC/CBE plenum box



PKA + CBC/CBE

Ød ₁ mm	Ød ₂ mm	B	C	D	e	H*	L	W
100	125	65	213	78	40	208 - 248	277	213
100	160	65	231	78	40	208 - 248	312	248
125	160	78	250	78	40	233 - 273	331	248
125	200	78	270	78	40	233 - 273	371	288
160	200	95	295	78	40	268 - 308	396	288
160	250	95	320	78	40	268 - 308	446	338
200	250	115	345	78	40	308 - 348	471	338
200	315	115	377	78	40	308 - 348	536	403
250	315	140	423	118	60	358 - 398	563	405
250	400	140	466	118	60	358 - 398	648	490
315	400	173	536	118	60	423 - 463	718	490

* Using accessory MBZ the H dimension will increase:
 Ød₂ = 125 - 200 mm => H +40 mm
 Ød₂ = 250 - 315 mm => H +60 mm
 Ød₂ = 400 mm => H +80 mm

Damper options



Order Code

Product CB a bbb ccc

Type CB

Damper
 C = Blade damper supply
 E = Blade damper extract

Duct connection Ød₁
 Ø100-315

Diffuser dimension Ød₂
 Ø125 - 400

Example 1: PKA-200 + CBC-160-200
 Example 2: PKA-200 + CBE-125-200

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Technical data PKA + MBB-S/-E

Following PKA+plenum box data are valid for MBB-S/-E. For MBC and MBE data, go to [LindQST Airborne calculator](#).

Capacity

Air flow q_v [l/s] and [m³/h], total pressure Δp_t [Pa], throw $l_{0,2}$ [m] and sound power level L_{WA} [dB(A)] can be seen in the diagrams.

Frequency-related sound power level

The sound power level in the frequency band is defined as $L_{WA} + K_{ok}$. K_{ok} values are specified in charts beneath the diagrams on the following pages.

Quick selection, supply air

PKA + MBB-S		$\Delta p_t \geq 50$ Pa 30dB(A)		$\Delta p_t \geq 50$ Pa 35dB(A)	
Duct $\varnothing d_1$	PKA $\varnothing d_2$	l/s	m ³ /h	l/s	m ³ /h
100	125	33	119	39	140
100	160	39	140	47	169
125	125	40	144	48	173
125	160	51	184	61	220
125	200	58	209	70	252
160	160	59	212	70	252
160	200	67	241	84	302
160	250	77	277	99	356
200	200	83	299	100	360
200	250	96	346	118	425
200	315	112	403	139	500
250	250	118	425	139	500
250	315	133	479	163	587
250	400	128	461	174	626
315	315	145	522	173	623
315	400	173	623	209	752

Sound attenuation

Sound attenuation of the diffusers ΔL from duct to room, including and reflection, see table below.

PKA + MBB-S/-E		Sound attenuation ΔL [dB]							
Duct $\varnothing d_1$	PKA $\varnothing d_2$	Centre frequency Hz							
		63	125	250	500	1K	2K	4K	8K
100	125	19	16	7	19	18	18	18	21
100	160	21	16	5	15	17	18	16	19
125	125	18	13	9	20	13	19	18	19
125	160	12	13	8	19	13	16	17	19
125	200	16	11	5	16	13	15	15	17
160	160	17	17	11	19	18	17	20	20
160	200	14	14	7	21	15	16	18	19
160	250	15	15	5	17	13	15	16	18
200	200	15	10	6	16	17	15	19	18
200	250	12	9	5	14	17	15	17	17
200	315	12	7	4	11	15	14	16	15
250	250	14	8	8	14	16	17	17	18
250	315	12	6	6	15	15	15	16	17
250	400	13	5	4	13	14	14	15	15
315	315	7	9	8	14	17	16	17	21
315	400	7	8	8	12	16	16	16	18

Balancing

Balancing guide, see the [MB installation instruction](#).

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PKA

Technical data PKA + CBC/CBE

Following PKA+plenum box data are valid for CBC.
 For CBE data, follow link below. For complete configuration of your PKA diffuser, go to the [LindQST Airborne calculator](#).

Capacity

Air flow q_v [l/s] and [m³/h], total pressure Δp_t [Pa], throw $l_{0,2}$ [m] and sound power level L_{WA} [dB(A)] can be seen in the diagrams.

Frequency-related sound power level

The sound power level in the frequency band is defined as $L_{WA} + K_{ok}$. K_{ok} values are specified in charts beneath the diagrams on the following pages.

Quick selection, supply air

PKA + CBC		$\Delta p_t \geq 50$ Pa 30dB(A)		$\Delta p_t \geq 50$ Pa 35dB(A)	
Duct $\varnothing d_1$	PKA $\varnothing d_2$	l/s	m ³ /h	l/s	m ³ /h
100	125	25	91	44	159
100	160	25	89	57	206
125	160	40	146	64	229
125	200	41	146	78	279
160	200	52	188	86	311
160	250	54	196	118	426
200	250	73	264	126	453
200	315	--	--	142	512
250	315	--	--	164	589
250	400	--	--	192	690
315	400	--	--	219	787

Sound attenuation

Sound attenuation of the diffusers ΔL from duct to room, including and reflection, see table below.

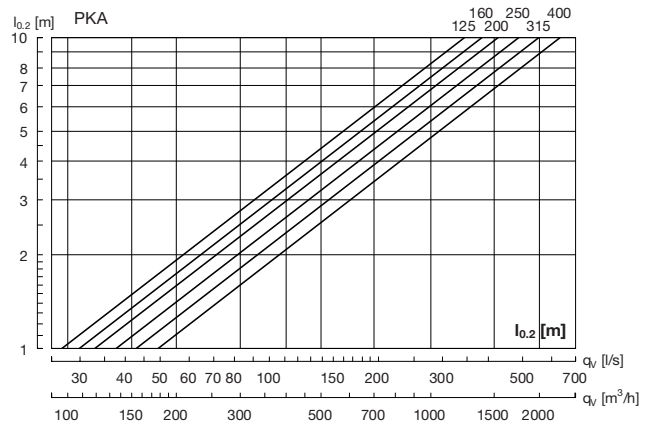
PKA + CBC/CBE		Sound attenuation ΔL [dB]							
Duct $\varnothing d_1$	PKA $\varnothing d_2$	Centre frequency Hz							
		63	125	250	500	1K	2K	4K	8K
100	125	25	17	15	16	16	18	12	12
100	160	25	12	14	15	15	16	10	9
125	160	22	13	11	15	16	16	11	11
125	200	20	18	12	13	16	14	10	11
160	200	20	10	10	14	17	13	11	9
160	250	21	10	10	14	15	12	9	8
200	250	22	7	9	13	15	11	11	9
200	315	19	8	7	13	14	10	11	9
250	315	17	9	7	14	15	10	10	7
250	400	17	7	9	13	11	9	9	7
315	400	18	3	10	14	12	11	9	11

Balancing

Balancing guide, see the [CBC/CBE installation instruction](#).

Throw $l_{0,2}$

Throw $l_{0,2}$ [m] can be seen in the diagram for isothermal air, at a terminal velocity of 0,2 m/s.



Correction throw $l_{0,2}$

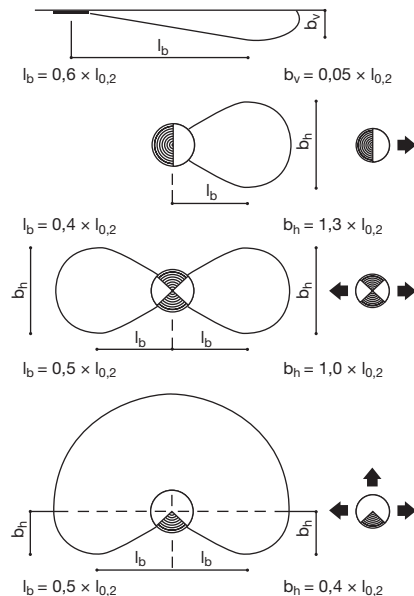
PKA $\varnothing d$	1 - ways	2 - ways	3 - ways
125	2.6	1.8	1.4
160	2.5	1.7	1.3
200	2.4	1.7	1.3
250	2.3	1.7	1.3
315	2.2	1.7	1.2
400	2.3	1.7	1.2

Air jet distribution

l_b = Distance from the diffuser to the point where there is maximum dispersal.

b_v = Depth of the air jet on a vertical plane.

b_h = Width of the air jet on a horizontal plane.

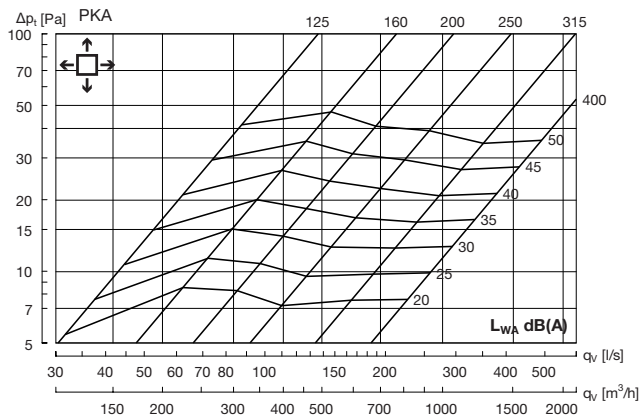


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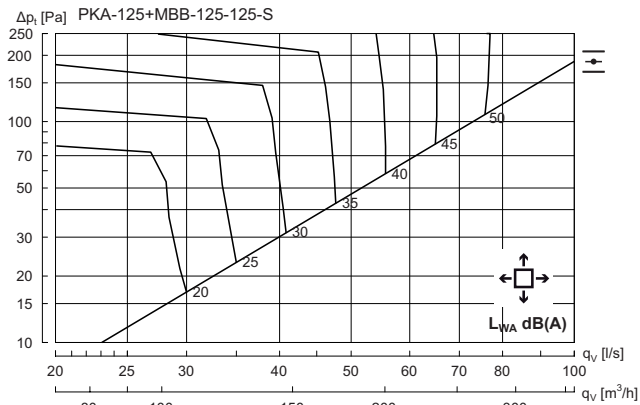
PKA

Technical data

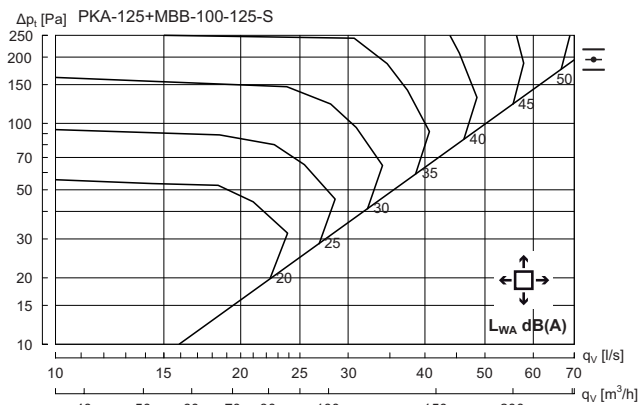
PKA without box - supply air



PKA 125 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K_{stat}	9	5	-1	-4	-3	-11	-20	-26



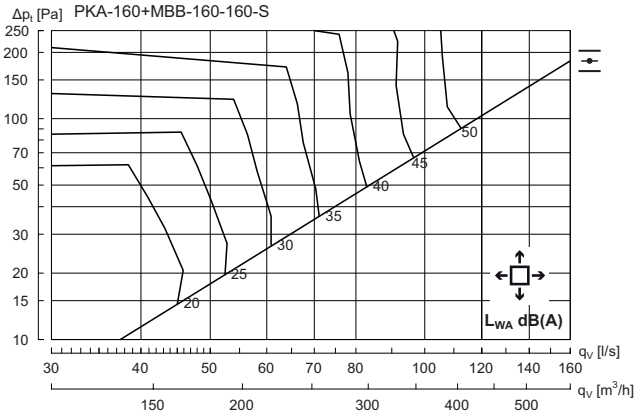
Hz	63	125	250	500	1K	2K	4K	8K
K_{stat}	11	7	3	-5	-5	-11	-18	-25

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PKA

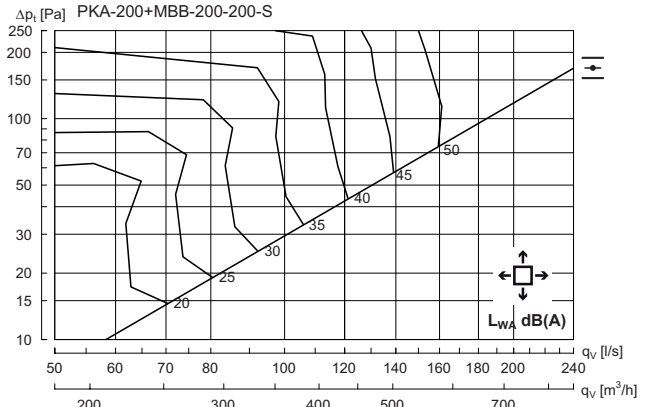
Technical data

PKA 160 + MBB-S - Supply air

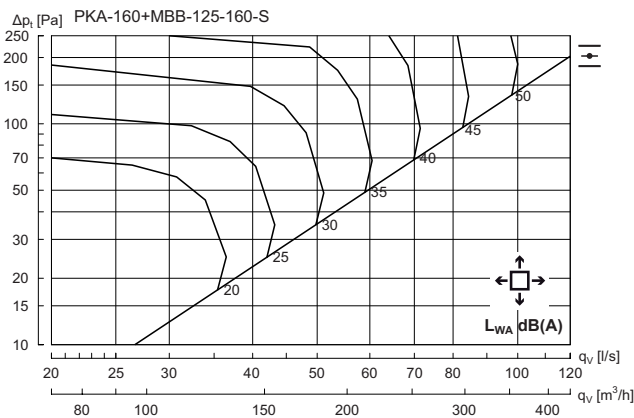


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	8	5	-2	-4	-3	-11	-21	-29

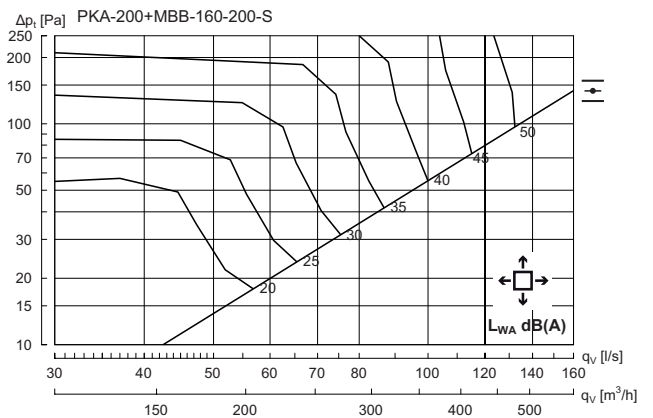
PKA 200 + MBB-S - Supply air



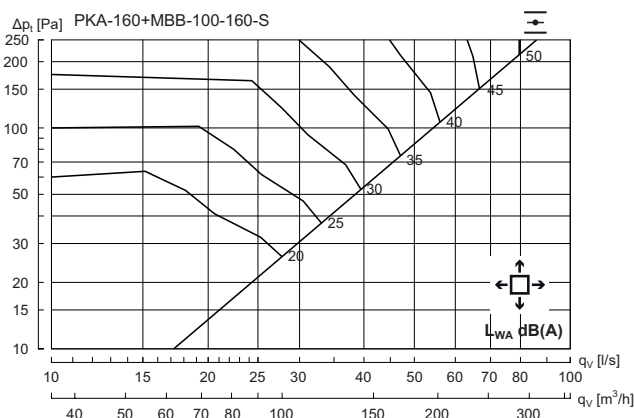
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	5	-3	-3	-3	-11	-22	-29



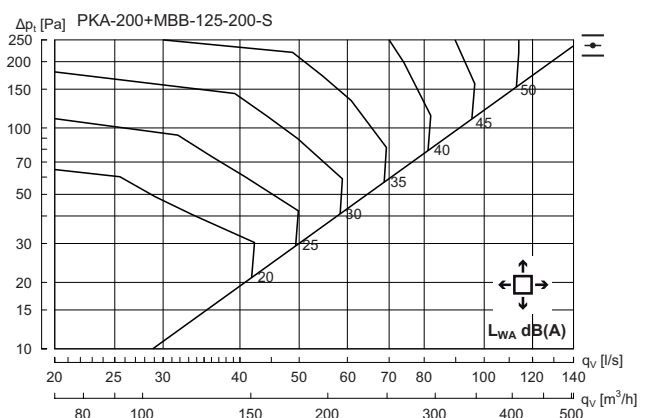
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	5	1	-4	-4	-10	-17	-25



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	-2	-4	-3	-10	-20	-26



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	4	1	-3	-5	-10	-15	-19



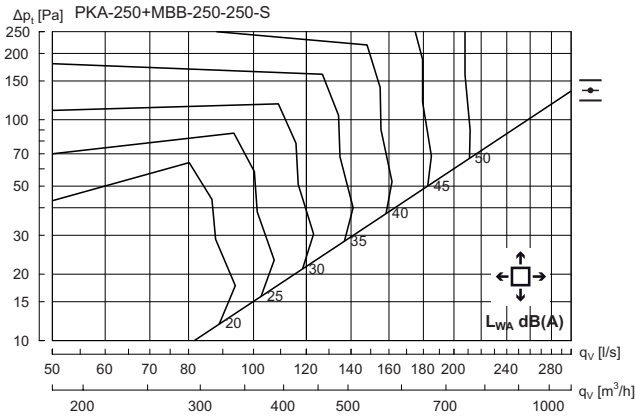
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	1	-4	-5	-10	-15	-22

Formo - Perforated diffuser

PKA

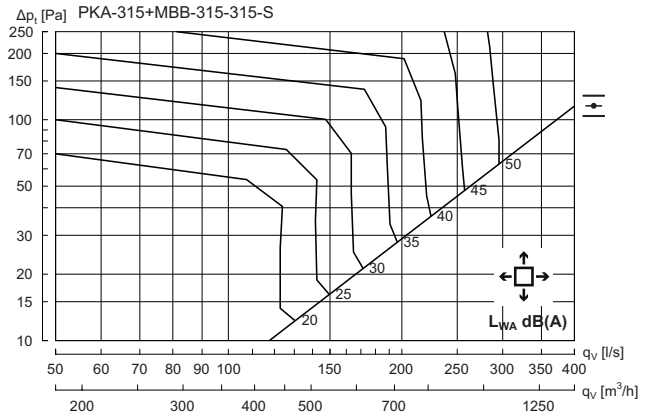
Technical data

PKA 250 + MBB-S - Supply air

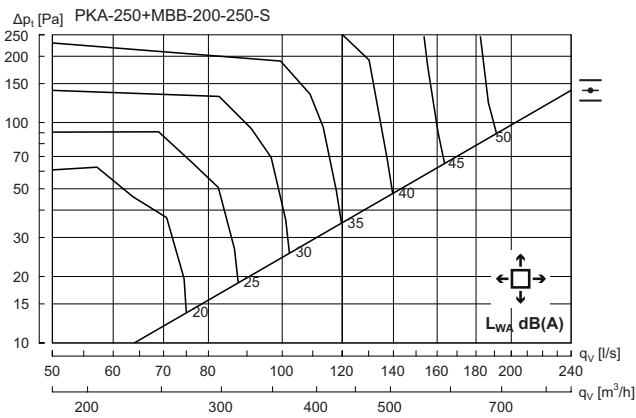


Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	11	3	-4	-3	-3	-12	-22	-30

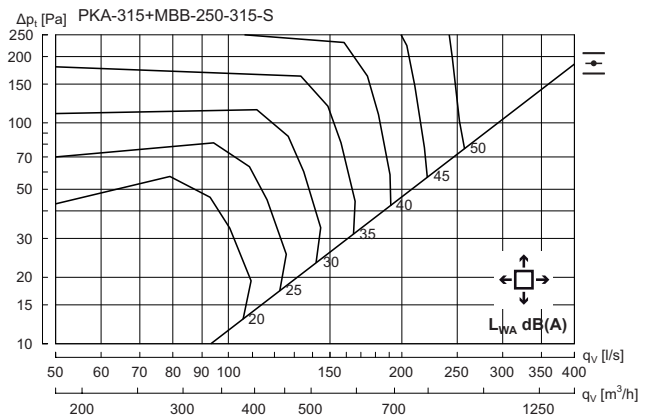
PKA 315 + MBB-S - Supply air



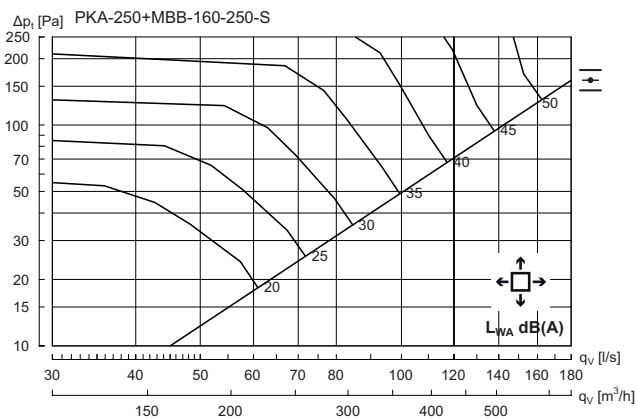
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	12	2	-3	-2	-3	-13	-23	-33



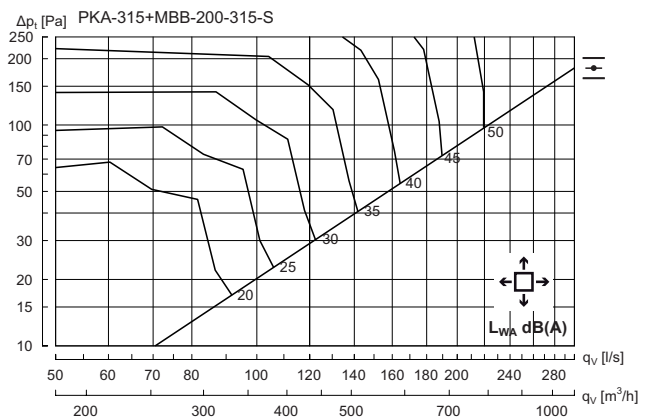
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	10	5	-2	-3	-3	-11	-20	-28



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	11	3	-2	-3	-4	-11	-18	-27



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	8	5	0	-4	-4	-10	-17	-23



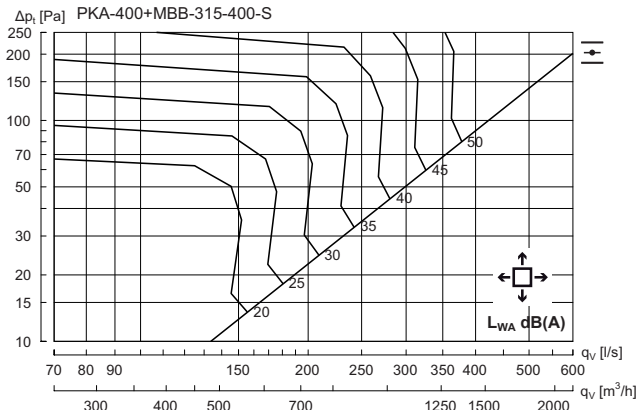
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	10	5	-1	-3	-4	-11	-19	-25

Formo - Perforated diffuser

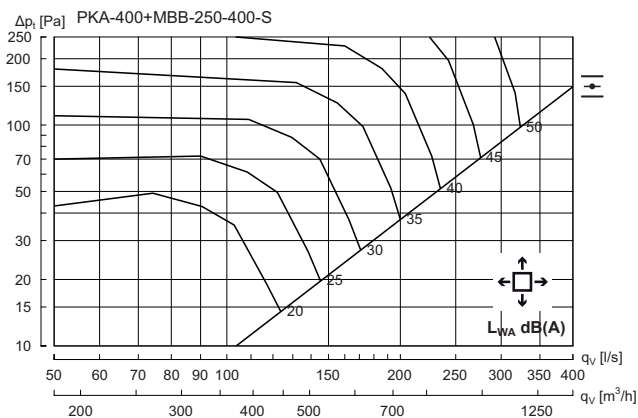
PKA

Technical data

PKA 400 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K_{sek}	14	2	0	-2	-5	-13	-17	-26



Hz	63	125	250	500	1K	2K	4K	8K
K_{sek}	10	4	0	-2	-4	-11	-17	-24

Correction sound power level (L_{WA}) and pressure loss (ΔP_t).

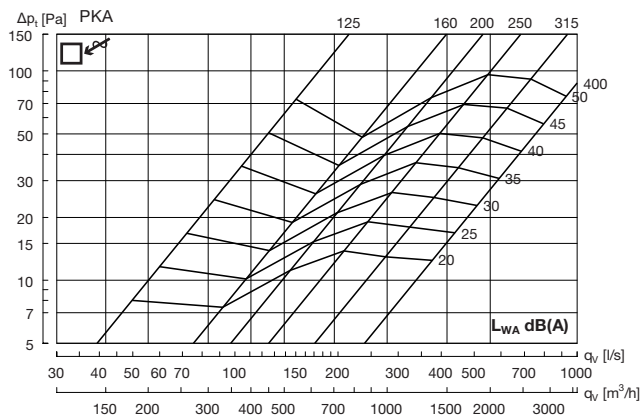
PKA + MBB-S		1 - ways		2 - ways		3 - ways	
Duct	PKA	L_{WA}	Δp_t	L_{WA}	Δp_t	L_{WA}	Δp_t
100	125	+ 10	x 1.3	+ 4	x 1.1	+ 2	x 1.05
100	160	+ 5	x 1.1	+ 2	x 1.05	+ 1	x 1
125	125	+ 10	x 1.35	+ 6	x 1.1	+ 4	x 1.05
125	160	+ 10	x 1.4	+ 4	x 1.1	+ 1	x 1
125	200	+ 4	x 1.2	+ 2	x 1.05	+ 1	x 1
160	160	+ 13	x 1.8	+ 6	x 1.3	+ 2	x 1.1
160	200	+ 16	x 1.7	+ 10	x 1.2	+ 4	x 1.05
160	250	+ 10	x 1.3	+ 6	x 1.1	+ 3	x 1
200	200	+ 17	x 2.3	+ 11	x 1.4	+ 7	x 1.1
200	250	+ 13	x 1.8	+ 6	x 1.2	+ 4	x 1.1
200	315	+ 9	x 1.5	+ 4	x 1.1	+ 0	x 1.05
250	250	+ 21	x 2.1	+ 11	x 1.4	+ 7	x 1.2
250	315	+ 19	x 1.8	+ 7	x 1.2	+ 3	x 1.1
250	400	+ 10	x 1.5	+ 6	x 1.2	+ 0	x 1
315	315	+ 21	x 2.1	+ 10	x 1.3	+ 4	x 1.1
315	400	+ 21	x 1.8	+ 8	x 1.5	+ 3	x 1.2

Formo - Perforated diffuser

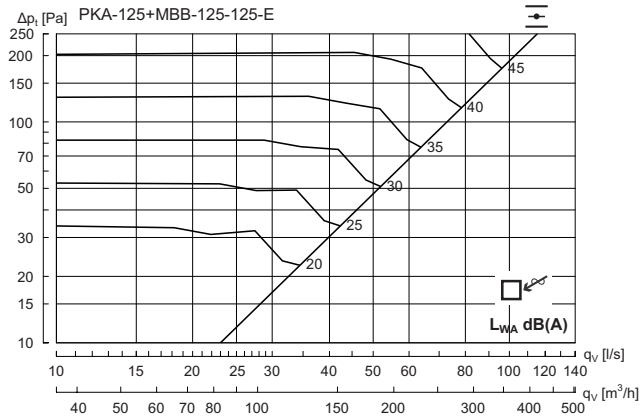
PKA

Technical data

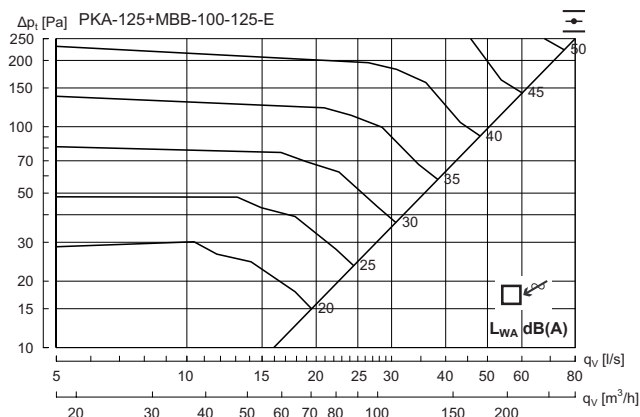
PKA without box - Extract air



PKA 125 + MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	13	5	-1	-4	-4	-11	-15	-20



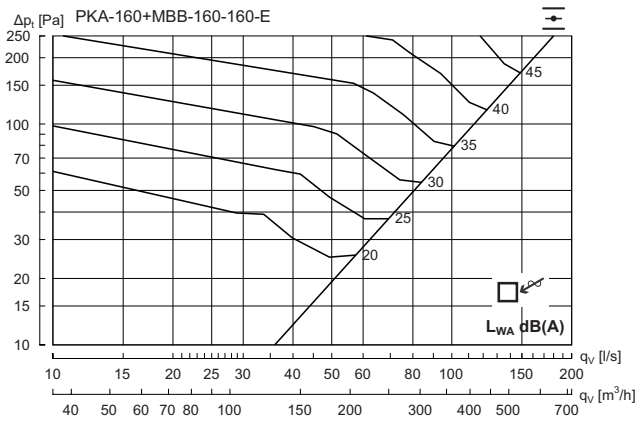
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	13	-1	3	-3	-6	-10	-16	-19

Formo - Perforated diffuser

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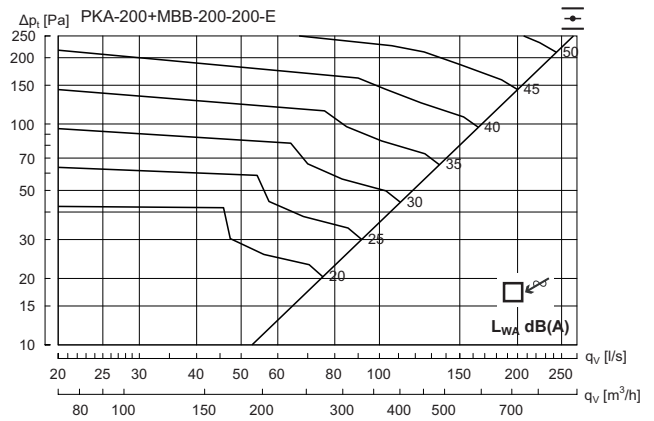
Technical data

PKA 160 + MBB-E - Extract air

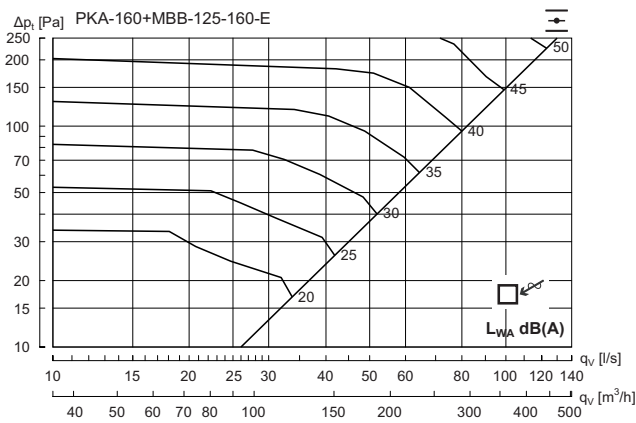


Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	16	6	-1	-5	-4	-10	-15	-19

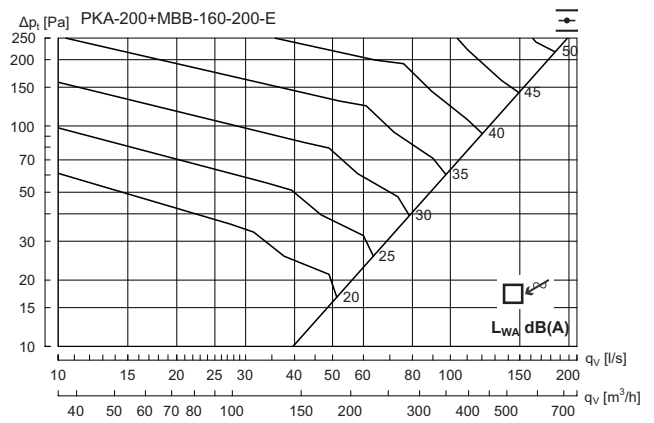
PKA 200 + MBB-E - Extract air



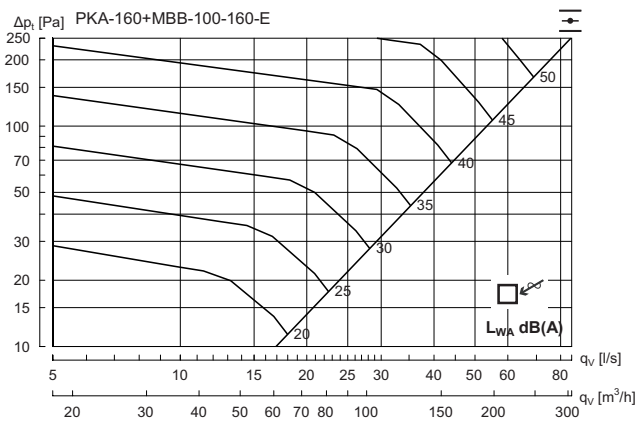
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	15	4	-1	-4	-5	-9	-16	-25



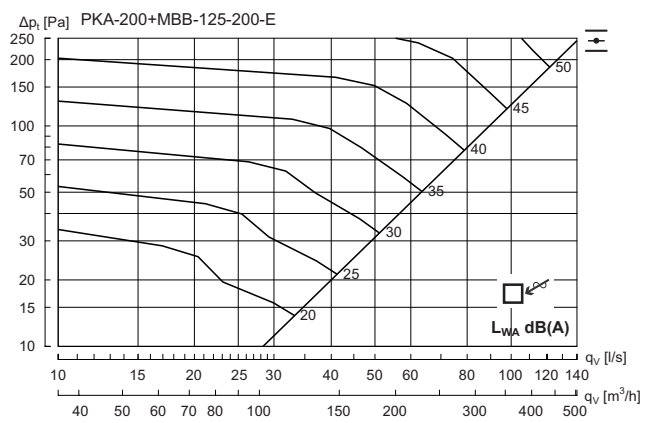
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	13	5	0	-3	-5	-11	-15	-22



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	15	6	-1	-5	-5	-9	-14	-20



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	10	-1	5	-3	-8	-11	-18	-25



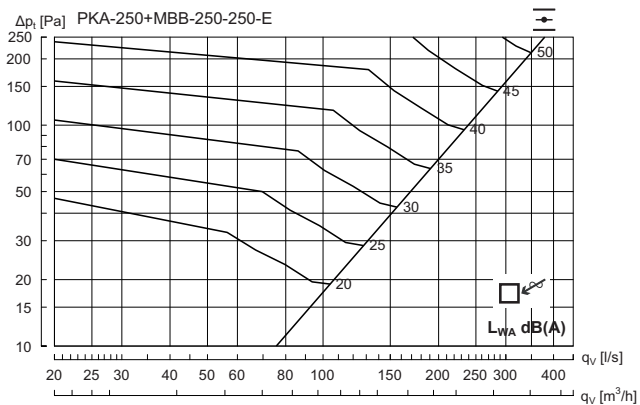
Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	9	3	1	-4	-5	-10	-14	-21

Formo - Perforated diffuser

PKA

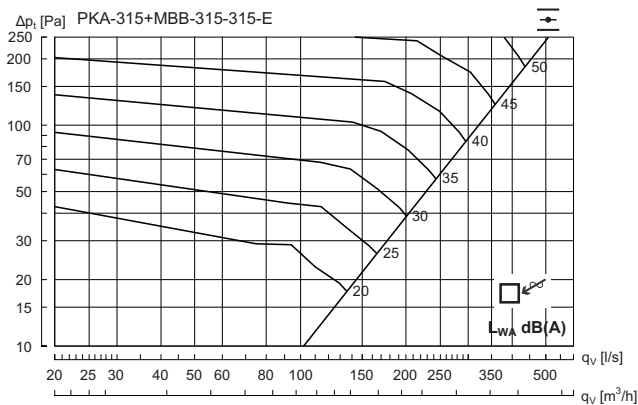
Technical data

PKA 250 + MBB-E - Extract air

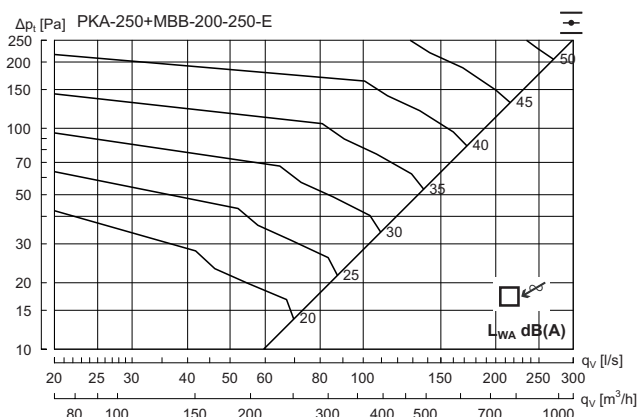


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	2	-3	-5	-11	-16	-25

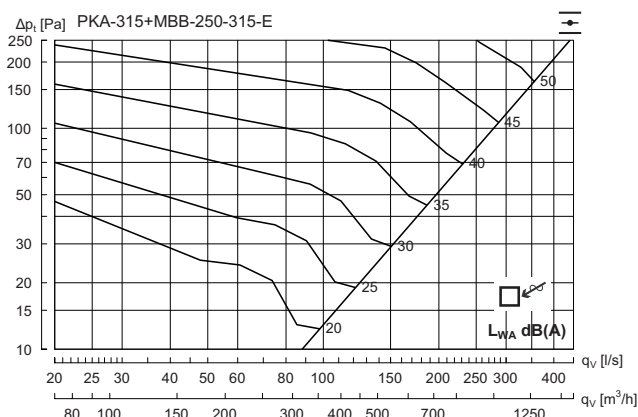
PKA 315 + MBB-E - Extract air



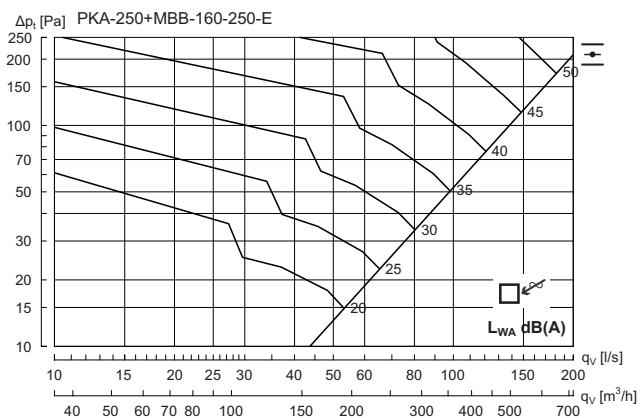
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	5	3	-4	-6	-10	-16	-26



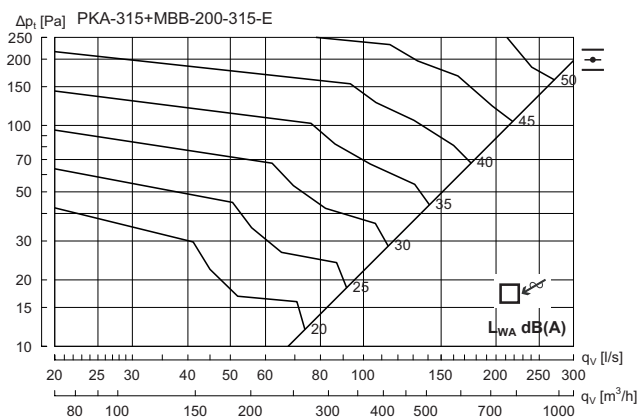
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	5	0	-3	-5	-10	-14	-23



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	5	2	-3	-6	-10	-16	-24



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	16	6	0	-5	-5	-9	-15	-21



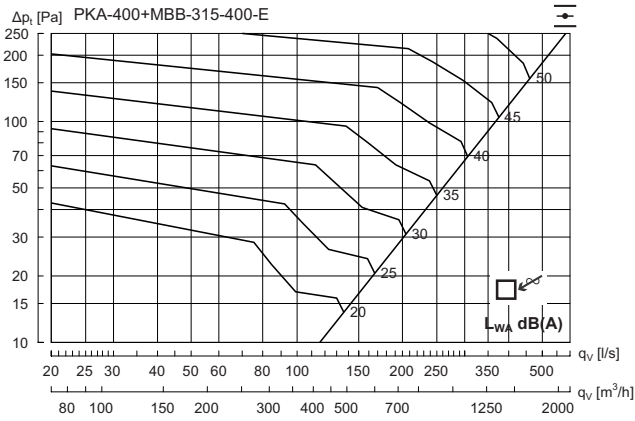
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	5	0	-3	-5	-9	-15	-23

Formo - Perforated diffuser

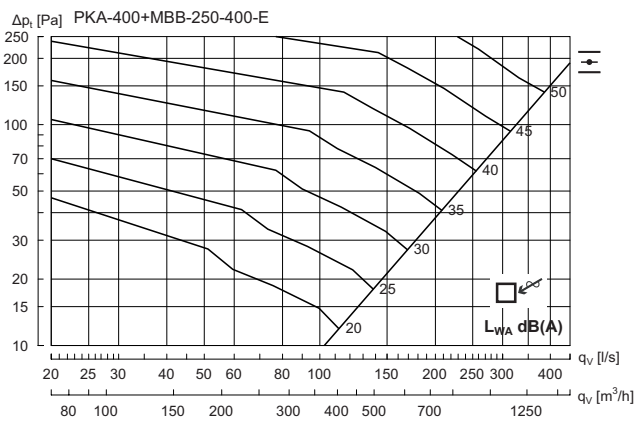
PKA

Technical data

PKA 400 + MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	4	2	-3	-6	-9	-14	-25



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	2	-4	-5	-10	-15	-23



Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

indab | For a better climate